

## PATENT COOPERATION TREATY

## PCT

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INTERNATIONAL PRELIMINARY EXAMINATION REPORT  
(PCT Article 36 and Rule 70)

Applicant's or agent's file reference	<b>FOR FURTHER ACTION</b> See Notification of Transmittal of International Preliminary Examination Report (Form PCT/IPEA/416)	
International application No. PCT/GB03/00803	International filing date (day/month/year) 24.02.2003	Priority date (day/month/year) 26.02.2002
International Patent Classification (IPC) or both national classification and IPC A61K47/38, A61K47/38		
Applicant ASTRAZENECA AB et al.		

1. This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.
2. This REPORT consists of a total of 6 sheets, including this cover sheet.
- ☐ This report is also accompanied by ANNEXES, i.e. sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).
- These annexes consist of a total of sheets.

## 3. This report contains indications relating to the following items:

- I ☒ Basis of the opinion
- II ☐ Priority
- III ☒ Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- IV ☐ Lack of unity of invention
- V ☒ Reasoned statement under Rule 66.2(a)(ii) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- VI ☐ Certain documents cited
- VII ☐ Certain defects in the international application
- VIII ☐ Certain observations on the international application

Date of submission of the demand  22.08.2003	Date of completion of this report  17.12.2003
Name and mailing address of the International preliminary examining authority:   European Patent Office D-80298 Munich Tel. +49 89 2399 - 0 Tx: 523656 epmu d Fax: +49 89 2399 - 4465	Authorized Officer  Telephone No. +49 89 2399-  

**INTERNATIONAL PRELIMINARY  
EXAMINATION REPORT**

International application No. PCT/GB03/00803

**I. Basis of the report**

1. With regard to the **elements** of the international application (*Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report since they do not contain amendments (Rules 70.16 and 70.17))*):

**Description, Pages**

1-38 as originally filed

**Claims, Numbers**

1-20 as originally filed

**Drawings, Sheets**

1/4-4/4 as originally filed

2. With regard to the **language**, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.

These elements were available or furnished to this Authority in the following language: , which is:

- ☐ the language of a translation furnished for the purposes of the international search (under Rule 23.1(b)).
- ☐ the language of publication of the international application (under Rule 48.3(b)).
- ☐ the language of a translation furnished for the purposes of international preliminary examination (under Rule 55.2 and/or 55.3).

3. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:

- ☐ contained in the international application in written form.
- ☐ filed together with the international application in computer readable form.
- ☐ furnished subsequently to this Authority in written form.
- ☐ furnished subsequently to this Authority in computer readable form.
- ☐ The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.
- ☐ The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

4. The amendments have resulted in the cancellation of:

- ☐ the description, pages:
- ☐ the claims, Nos.:
- ☐ the drawings, sheets:

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5. ☐ This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed (Rule 70.2(c)).
- (Any replacement sheet containing such amendments must be referred to under item 1 and annexed to this report.)*

6. Additional observations, if necessary:

**III. Non-establishment of opinion with regard to novelty, inventive step and industrial applicability**

1. The questions whether the claimed invention appears to be novel, to involve an inventive step (to be non-obvious), or to be industrially applicable have not been examined in respect of:
- ☐ the entire international application,
  - ☒ claims Nos. 18, 19 (IA only)
- because:
- ☒ the said international application, or the said claims Nos. 18, 19 (IA only) relate to the following subject matter which does not require an international preliminary examination (specify):
- see separate sheet**
- ☐ the description, claims or drawings (*indicate particular elements below*) or said claims Nos. are so unclear that no meaningful opinion could be formed (*specify*):
  - ☐ the claims, or said claims Nos. are so inadequately supported by the description that no meaningful opinion could be formed.
  - ☐ no international search report has been established for the said claims Nos.
2. A meaningful international preliminary examination cannot be carried out due to the failure of the nucleotide and/or amino acid sequence listing to comply with the standard provided for in Annex C of the Administrative Instructions:
- ☐ the written form has not been furnished or does not comply with the Standard.
  - ☐ the computer readable form has not been furnished or does not comply with the Standard.

**V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement**

1. Statement

Novelty (N)	Yes: Claims	1-20
	No: Claims	
Inventive step (IS)	Yes: Claims	1-20
	No: Claims	
Industrial applicability (IA)	Yes: Claims	1-17, 20
	No: Claims	18, 19

2. Citations and explanations

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**see separate sheet**

## **1. Section III**

Claims 18 and 19 are directed to a method of treatment of the human/animal body by therapy. Such subject-matter is considered by this Authority to be covered by the provisions of Rule 67.1(iv) PCT, and therefore no opinion shall be formulated with respect to industrial applicability of the subject-matter of these claims (Article 34(4)(a)(I) PCT). However an opinion shall be formulated with respect to novelty and inventive step based on the alleged effects of the compounds/compositions.

## **2. Section V**

### **2.1 Cited Documents**

The following documents (D) are referred to in this Opinion; the numbering will be adhered to in the rest of the procedure:

- D1: WO 96/33980 A (ZENECA LTD; GIBSON KEITH HOPKINSON (GB)) 31 October 1996
- D2: US-A-4 344 934 (MARTIN FREDERICK H ET AL) 17 August 1982
- D3: US 2003/045537 A1 (LEE JAE-YEOL ET AL) 6 March 2003

Unless otherwise indicated reference is hereafter made to the passages cited in the Search Report.

### **2.2 The prior art**

WO9633980: Discloses preparations of the claimed quinazoline derivative which are enteric coated with a coating of cellulose acetate phthalate, a water soluble cellulose.

US4344934: Discloses the use of water-soluble cellulose derivatives for increasing the bioavailability of poorly soluble drugs.

US2003045537A1: Mentions the fact that the low solubility, and consequently bioavailability, of the claimed molecule is a problem recognised in the art.

### **2.3 Art 33(2) PCT (Novelty)**

The subject-matter of claims 1-20 of the present application meets the requirements of Article 33(2) PCT.

The coating of D1 is made with cellulose acetate phthalate, which is not an ester of a water-soluble cellulose ether as required by the present independent claims.

### **2.4 Art 33(3) PCT (Inventive step)**

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International application No. PCT/GB 03/00803

The subject-matter of claims 1-20 of the present application meets the requirements of Article 33(3) PCT.

Document D2 shows to the skilled person how the problem of low *solubility/bioavailability* of active principles could be solved, i.e. by using a water-soluble cellulose derivative like cellulose acetate phthalate (and a wetting agent). The document however is silent about the possibility of using the same derivative for solving the technical problem of *reducing the precipitation rate* of an active principle in general, let alone of the specific ones of the present application. The skilled person faced with the problem above would not therefore have considered D2, and in any case would have had no reason for combining it with the molecules of D1. Inventive step is therefore acknowledged.

**2.5 Art 33(4) PCT (Industrial applicability)**

As stated above, no opinion is given on the question of whether present claims 18 and 19 are industrially applicable since their patentability is *inter alia* dependent upon their formulation as well as upon national and regional laws and no unifying criteria is provided in this field by the PCT.